

## CLAIMS

---

Claim 1 (currently amended). An air extraction apparatus for a work station, especially one at which heat is supplied to food, having formed on both sides of the work station respective air openings which are connected to a blower and a filter arrangement, ~~characterized in that~~ wherein

the air openings (36, 38), the blower (26), the filter arrangement (28) and a region 42 located between the air openings (36, 38) and immediately above the work station (14), form a closed air circulation loop (48) which produces an air curtain (44) during operation of the air extraction apparatus (12) in the region between the air opening (36) on an upstream side of the work station (14) and the air opening (38) on a downstream side of the work station (14),

the blower (26) and the filter arrangement (28) are housed in a space (24, 24') which lies within the air circulation loop (48) and is connected to the air openings (36, 38) on both sides of the work station (14),

the air circulation loop (48) includes an air outlet (50) for a portion (52) of the air from the air circulation loop (48), the air outlet (50) being located downstream from the blower (26) and the filter arrangement (28), ~~and~~

the blower (26) is located between at least two filters (30, 32) of the filter arrangement (28), the filter upstream of the blower (26) being a grease separating filter (30) and the filter downstream of the blower (26) being an odor filter (32)[[.]],  
and

the air circulation loop (48) has at least one vertical air channel (40) in the region below the work station (14), through which at least one vertical air channel the space in which the blower (26) and the filter arrangement (28) are housed is connected to one of the two air openings (36, 38) on both sides of the work station (14).

Claim 2 (currently amended). An air extraction apparatus according to claim 1, ~~characterized in that~~ wherein the air outlet (50) has an opening of adjustable size.

Claim 3-28 (canceled).

Claim 29 (currently amended). An air extraction apparatus according to claim 1, ~~characterized in that~~ wherein the blower (26) is a centrifugal blower.

Claim 30 (currently amended). An air extraction apparatus according to claim 1, ~~characterized in that~~ wherein the grease separating filter (30) is a cyclone filter.

Claim 31 (currently amended). An air extraction apparatus according to claim 1, ~~characterized in that~~ wherein a grease collecting pan (56) is located beneath the grease separating filter (30).

Claim 32 (currently amended). An air extraction apparatus according to claim 1, ~~characterized in that~~ wherein the odor filter (32) is a zeolite filter.

Claim 33 (currently amended). An air extraction apparatus according to claim 1, ~~characterized in that~~ wherein the air circulation loop (48) has two vertical air channels (39, 40) in the region below the work station (14), above which the space in which the blower (26) and the filter apparatus (28) are housed is connected to air openings (36, 38) on both sides of the work station (14).

Claim 34 (currently amended). An air extraction apparatus according to claim 1, ~~characterized in that~~ wherein a space (24') in which the blower (26) and the filter installation (28) are housed, is located beside the work station (14).

Claim 35 (currently amended). An air extraction apparatus according to claim 1, ~~characterized in that~~ wherein the grease separating filter (30) and the odor filter (32) are positioned inclined with respect to the vertical (39, 40).

Claim 36 (currently amended). An air extraction apparatus according to claim 9, ~~characterized in that~~ 35, wherein the grease separating filter (30) is inclined with respect to the vertical at an angle of 40° to 50°, preferably of 45°.

Claim 37 (currently amended). An air extraction apparatus according to claim 9, ~~characterized in that~~ 35, wherein the odor filter (32) is inclined with respect to the vertical at an angle of 30° to 40°, preferably 35°.

C  
Claim 38 (currently amended). An air extraction apparatus according to claim 9, ~~characterized in that~~ 35, wherein the space (24, 24') in which the blower (26) and the filter arrangement (28) are housed, is divided by the two filters (30, 32) into an entry and exit chamber (58, 60) respectively.

Claim 39 (currently amended). An air extraction apparatus according to claim 12, ~~characterized in that~~ 38, wherein the air outlet (50) is located in a wall of the exit chamber (60).

Claim 40 (currently amended). An air extraction apparatus according to claim 8, ~~characterized in that~~ 34, wherein the work station (14) is a grill which extends above the space in which the blower (26) and the filter ~~installation~~ arrangement (28) are installed or beside that space (24').

Claim 41 (currently amended). An air extraction apparatus according to claim 1, ~~characterized in that~~ wherein the air outlet (50) is so-shaped or adjusted that 75% of the air is released from the air circulation loop (48) and the remaining 25% reach the work station (14) as ambient air and form its air curtain (44).

Claim 42 (currently amended). An air extraction apparatus according to claim 1, ~~characterized by~~ wherein at least one air intake (38, 63) is provided for drawing ambient air into the air circulation loop (48) to replace the air released into the surroundings through the air outlet (50) from the air circulation loop (48).

Claim 43 (currently amended). An air extraction apparatus according to claim 16, ~~characterized in that~~ 42, wherein the air opening (38) is on the downstream side of the work station (14).

Claim 44 (currently amended). An air extraction apparatus according to claim 16, ~~characterized in that~~ 42, wherein the air intake is an additional air opening (63) located downstream from the air opening (38) on the downstream side of the work station (14) and upstream of the blower (26).

Claim 45 (currently amended). An air extraction apparatus according to claim 1, ~~characterized in that~~ wherein it forms a kitchen module (10) integrated into a kitchen work station.

Claim 46 (currently amended). An air extraction apparatus according to claim 1, ~~characterized in that~~ wherein both air openings (36, 38) are so located relative to each other than an air flow axis symbolizing the air curtain (44) is inclined slightly downwardly with respect to the horizontal toward the downstream air opening (38).

Claim 47 (currently amended). An air extraction apparatus according to claim 1, ~~characterized in that~~ wherein the upstream air opening (36) is formed as a narrow exit slot and ~~that~~ the oppositely located downstream air opening (38) takes the form of a substantially broader intake slot.

Claim 48 (currently amended). An air extraction apparatus according to claim 21, ~~characterized in that~~ 47, wherein the exit slot and the intake slot are formed by air guiding elements (64-67) in the vertical air channels (39, 40).

Claim 49 (currently amended). An air extraction apparatus according to claim 22, ~~characterized in that~~ 48, wherein the exit slot is inclined slightly

downwardly with respect to the horizontal and ~~in that~~ the intake slot is provided with radii located on its oppositely positioned inner walls.

Claim 50 (currently amended). An air extraction apparatus according to claim 21, ~~characterized in that~~ 47, wherein a segment of the vertical air channel which extends behind the downstream air opening (38) is covered upwardly by an air guiding element (65).

Claim 51 (currently amended). An air extraction apparatus according to claim 24, ~~characterized in that~~, 50, wherein for increasing size of the work station and resulting increasing spacing between the upstream and downstream air openings (36, 38), the covering upper air guiding element (65', 65'') is increasingly shortened.

Claim 52 (currently amended). An air extraction apparatus according to claim 25, ~~characterized in that~~ 51, wherein the air guiding element (65'') has an S-shaped cross-section.

Claim 53 (currently amended). An air extraction apparatus according to claim 1, ~~characterized in that~~ wherein the work station (14) above the air openings (36, 38) is surrounded on three sides, not including its operator's side (13), by an air

guiding wall, especially a splash guard (11), which increases in height starting from the operator's side (13) in a direction transverse to the air curtain (44) toward the opposite side of the work station.

Claim 54 (currently amended). An air extraction apparatus according to claim 27, ~~characterized in that~~ 53, wherein the air guiding wall (11) is a U-shaped edge-encircling metal sheet. --

Claim 55 (new). An air extraction apparatus for a work station, especially one at which heat is supplied to food, having formed on both sides of the work station respective air openings which are connected to a blower and a filter arrangement, wherein

the air openings (36, 38), the blower (26), the filter arrangement (28) and a region 42 located between the air openings (36, 38) and immediately above the work station (14), form a closed air circulation loop (48) which produces an air curtain (44) during operation of the air extraction apparatus (12) in the region between the air opening (36) on an upstream side of the work station (14) and the air opening (38) on a downstream side of the work station (14),

the blower (26) and the filter arrangement (28) are housed in a space (24, 24') which lies within the air circulation loop (48) and is connected to the air openings (36, 38) on both sides of the work station (14),



the air circulation loop (48) includes an air outlet (50) for a portion (52) of the air from the air circulation loop (48), the air outlet (50) being located downstream from the blower (26) and the filter arrangement (28),

the blower (26) is located between at least two filters (30, 32) of the filter arrangement (28), the filter upstream of the blower (26) being a grease separating filter (30) and the filter downstream of the blower (26) being an odor filter (32), and

the air outlet (50) has an opening of adjustable size.

Claim 56 (new). An air extraction apparatus for a work station, especially one at which heat is supplied to food, having formed on both sides of the work station respective air openings which are connected to a blower and a filter arrangement, wherein

the air openings (36, 38), the blower (26), the filter arrangement (28) and a region 42 located between the air openings (36, 38) and immediately above the work station (14), form a closed air circulation loop (48) which produces an air curtain (44) during operation of the air extraction apparatus (12) in the region between the air opening (36) on an upstream side of the work station (14) and the air opening (38) on a downstream side of the work station (14),

the blower (26) and the filter arrangement (28) are housed in a space (24, 24') which lies within the air circulation loop (48) and is connected to the air openings (36, 38) on both sides of the work station (14),

the air circulation loop (48) includes an air outlet (50) for a portion (52) of the air from the air circulation loop (48), the air outlet (50) being located downstream from the blower (26) and the filter arrangement (28),

the blower (26) is located between at least two filters (30, 32) of the filter arrangement (28), the filter upstream of the blower (26) being a grease separating filter (30) and the filter downstream of the blower (26) being an odor filter (32), and

the air outlet (50) is so shaped or adjusted that 75% of the air is released from the air circulation loop (48) and the remaining 25% reach the work station (14) and form its air curtain (44).

Claim 57 (new). An air extraction apparatus for a work station, especially one at which heat is supplied to food, having formed on both sides of the work station respective air openings which are connected to a blower and a filter arrangement, wherein

the air openings (36, 38), the blower (26), the filter arrangement (28) and a region 42 located between the air openings (36, 38) and immediately above the work station (14), form a closed air circulation loop (48) which produces an air curtain (44) during operation of the air extraction apparatus (12) in the region between the air opening (36) on an upstream side of the work station (14) and the air opening (38) on a downstream side of the work station (14),

the blower (26) and the filter arrangement (28) are housed in a space (24, 24') which lies within the air circulation loop (48) and is connected to the air openings (36, 38) on both sides of the work station (14),

the air circulation loop (48) includes an air outlet (50) for a portion (52) of the air from the air circulation loop (48), the air outlet (50) being located downstream from the blower (26) and the filter arrangement (28),

the blower (26) is located between at least two filters (30, 32) of the filter arrangement (28), the filter upstream of the blower (26) being a grease separating filter (30) and the filter downstream of the blower (26) being an odor filter (32), and

the upstream air opening (36) is formed as a narrow exit slot and the oppositely located downstream air opening (38) takes the form of a substantially broader intake slot.

Claim 58 (new). An air extraction apparatus for a work station, especially one at which heat is supplied to food, having formed on both sides of the work station respective air openings which are connected to a blower and a filter arrangement, wherein

the air openings (36, 38), the blower (26), the filter arrangement (28) and a region 42 located between the air openings (36, 38) and immediately above the work station (14), form a closed air circulation loop (48) which produces an air curtain (44) during operation of the air extraction apparatus (12) in the region between the

air opening (36) on an upstream side of the work station (14) and the air opening (38) on a downstream side of the work station (14),

the blower (26) and the filter arrangement (28) are housed in a space (24, 24') which lies within the air circulation loop (48) and is connected to the air openings (36, 38) on both sides of the work station (14),

the air circulation loop (48) includes an air outlet (50) for a portion (52) of the air from the air circulation loop (48), the air outlet (50) being located downstream from the blower (26) and the filter arrangement (28),

the blower (26) is located between at least two filters (30, 32) of the filter arrangement (28), the filter upstream of the blower (26) being a grease separating filter (30) and the filter downstream of the blower (26) being an odor filter (32),

the upstream air opening (36) is formed as a narrow exit slot and the oppositely located downstream air opening (38) takes the form of a substantially broader intake slot, and

the exit slot and the intake slot are formed by air guiding elements (64-67) in the vertical air channels (39, 40).

Claim 59 (new). An air extraction apparatus for a work station, especially one at which heat is supplied to food, having formed on both sides of the work station respective air openings which are connected to a blower and a filter arrangement, wherein

the air openings (36, 38), the blower (26), the filter arrangement (28) and a region 42 located between the air openings (36, 38) and immediately above the work station (14), form a closed air circulation loop (48) which produces an air curtain (44) during operation of the air extraction apparatus (12) in the region between the air opening (36) on an upstream side of the work station (14) and the air opening (38) on a downstream side of the work station (14),

the blower (26) and the filter arrangement (28) are housed in a space (24, 24') which lies within the air circulation loop (48) and is connected to the air openings (36, 38) on both sides of the work station (14),

the air circulation loop (48) includes an air outlet (50) for a portion (52) of the air from the air circulation loop (48), the air outlet (50) being located downstream from the blower (26) and the filter arrangement (28),

the blower (26) is located between at least two filters (30, 32) of the filter arrangement (28), the filter upstream of the blower (26) being a grease separating filter (30) and the filter downstream of the blower (26) being an odor filter (32),

the exit slot and the intake slot are formed by air guiding elements (64-67) in the vertical air channels (39, 40), and

the exit slot is inclined slightly downwardly with respect to the horizontal and the intake slot is provided with radii located on its oppositely positioned inner walls.

Claim 60 (new). An air extraction apparatus for a work station, especially one at which heat is supplied to food, having formed on both sides of the work station respective air openings which are connected to a blower and a filter arrangement, wherein

the air openings (36, 38), the blower (26), the filter arrangement (28) and a region 42 located between the air openings (36, 38) and immediately above the work station (14), form a closed air circulation loop (48) which produces an air curtain (44) during operation of the air extraction apparatus (12) in the region between the air opening (36) on an upstream side of the work station (14) and the air opening (38) on a downstream side of the work station (14),

the blower (26) and the filter arrangement (28) are housed in a space (24, 24') which lies within the air circulation loop (48) and is connected to the air openings (36, 38) on both sides of the work station (14),

the air circulation loop (48) includes an air outlet (50) for a portion (52) of the air from the air circulation loop (48), the air outlet (50) being located downstream from the blower (26) and the filter arrangement (28),

the blower (26) is located between at least two filters (30, 32) of the filter arrangement (28), the filter upstream of the blower (26) being a grease separating filter (30) and the filter downstream of the blower (26) being an odor filter (32),

the upstream air opening (36) is formed as a narrow exit slot and the oppositely located downstream air opening (38) takes the form of a substantially broader intake slot, and

a segment of the vertical air channel which extends behind the downstream air opening (38) is covered upwardly by an air guiding element (65).

Claim 61 (new). An air extraction apparatus for a work station, especially one at which heat is supplied to food, having formed on both sides of the work station respective air openings which are connected to a blower and a filter arrangement, wherein

the air openings (36, 38), the blower (26), the filter arrangement (28) and a region 42 located between the air openings (36, 38) and immediately above the work station (14), form a closed air circulation loop (48) which produces an air curtain (44) during operation of the air extraction apparatus (12) in the region between the air opening (36) on an upstream side of the work station (14) and the air opening (38) on a downstream side of the work station (14),

the blower (26) and the filter arrangement (28) are housed in a space (24, 24') which lies within the air circulation loop (48) and is connected to the air openings (36, 38) on both sides of the work station (14),

the air circulation loop (48) includes an air outlet (50) for a portion (52) of the air from the air circulation loop (48), the air outlet (50) being located downstream from the blower (26) and the filter arrangement (28),

the blower (26) is located between at least two filters (30, 32) of the filter arrangement (28), the filter upstream of the blower (26) being a grease separating filter (30) and the filter downstream of the blower (26) being an odor filter (32),

the upstream air opening (36) is formed as a narrow exit slot and the oppositely located downstream air opening (38) takes the form of a substantially broader intake slot,

a segment of the vertical air channel which extends behind the downstream air opening (38) is covered upwardly by an air guiding element (65), and

for increasing size of the work station and resulting increasing spacing between the upstream and downstream air openings (36, 38), the covering upper air guiding element (65', 65'') is increasingly shortened.

Claim 62 (new). An air extraction apparatus for a work station, especially one at which heat is supplied to food, having formed on both sides of the work station respective air openings which are connected to a blower and a filter arrangement, wherein

the air openings (36, 38), the blower (26), the filter arrangement (28) and a region 42 located between the air openings (36, 38) and immediately above the work



station (14), form a closed air circulation loop (48) which produces an air curtain (44) during operation of the air extraction apparatus (12) in the region between the air opening (36) on an upstream side of the work station (14) and the air opening (38) on a downstream side of the work station (14),

the blower (26) and the filter arrangement (28) are housed in a space (24, 24') which lies within the air circulation loop (48) and is connected to the air openings (36, 38) on both sides of the work station (14),

the air circulation loop (48) includes an air outlet (50) for a portion (52) of the air from the air circulation loop (48), the air outlet (50) being located downstream from the blower (26) and the filter arrangement (28),

the blower (26) is located between at least two filters (30, 32) of the filter arrangement (28), the filter upstream of the blower (26) being a grease separating filter (30) and the filter downstream of the blower (26) being an odor filter (32),

the upstream air opening (36) is formed as a narrow exit slot and the oppositely located downstream air opening (38) takes the form of a substantially broader intake slot,

a segment of the vertical air channel which extends behind the downstream air opening (38) is covered upwardly by an air guiding element (65), and

for increasing size of the work station and resulting increasing spacing between the upstream and downstream air openings (36, 38), the covering upper air guiding element (65', 65'') is increasingly shortened,

① the air guiding element (65") has an S-shaped cross-section.

---